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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/007,122	12/04/2001	Colin Bulthaup	NANO-00201	2119

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EXAMINER

YAN, REN LUO

ART UNIT	PAPER NUMBER
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2854

DATE MAILED: 12/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/007,122	Applicant(s) BULTHAUP ET AL.	
	Examiner Ren L Yan	Art Unit 2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 03/12/2002 6) ☐ Other: _____

DETAILED ACTION

Applicant's election without traverse of Group I, claims 1-12 filed on 8-11-2003 is acknowledged. Non-elected claims 13-88 have been canceled by applicant.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7, 11 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Mori et al(5,662,040). The patent to Mori et al teaches the structure of a micro-stencil as claimed including a membrane 50 having a receptor surface and a print surface which is provided with stencil features 50f, a flow region through the membrane to allow printing ink 80 to flow from the receptor surface to the print surface for printing the stencil features on a medium. The flow region comprises passages from the receptor surface to the print surface. Porous layer 14 and Porous layer 50d both serve as a reservoir for holding and supplying printing ink with the porous layer 14 being coupled to the receptor surface of the membrane. The porous material 50d is positioned within the flow region as recited. Both the porous layer 14 and porous layer 50d can be made of metal as recited. See Figs. 3, 5-7, column 7, lines 4-38 and column 9, lines 3-10 in Mori et al for details. With respect to claim 11, the thickness of the entire membrane 50 of Mori et al may be more than 1.0 micron. However, a portion of this membrane 50 must be less than 1.0 micron in thickness as recited.

Art Unit: 2854

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mori et al.

Mori et al teach all that is claimed except that Mori et al do not specify the lateral dimension of the stencil features. As is well known to those having ordinary skill in the art that the lateral dimension of the stencil features are determined based on the image patterns desired to be printed. In general, when fine image patterns are desired, the lateral dimension of the stencil features, which define the image pattern, would have to be small in order to show fine details of the image. Therefore, when the image patterns requires that the lateral dimension of the stencil features to be less than 5.0 microns as recited, it would have been obvious to one of ordinary skill in the art to design the stencil features accordingly so that a desired image pattern can be produced.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mori et al in view of Kinney et al(3,934,503). Mori et al teach all that is claimed except for the use of nylon as the stencil material. Kinney et al teach the conventionality of using nylon as the material for a stencil. See the abstract in Kinney et al for example. It would have been obvious to those having ordinary skill in the art to provide the stencil membrane of Mori et al with nylon as taught by Kinney et al in order to achieve high tensile strength for the stencil.

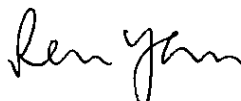
Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mori et al in view of Arai et al(4,957,808). Mori et al teach all that is claimed except for the use of polydimethylsiloxane as the stencil material. Arai et al teach the conventional use of polydimethylsiloxane for a stencil paper. See claim 8 in Arai et al for example. It would have been obvious to those having ordinary skill in the art to provide the stencil membrane of Mori et al with polydimethylsiloxane so as to achieve excellent release property for the stencil.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ren L Yan whose telephone number is 703-308-0978. The examiner can normally be reached on 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on 703-305-6619. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.


Ren L Yan
Primary Examiner
Art Unit 2854

Ren Yan
Dec. 9, 2003